

Application No. 10/575,147  
Response dated: December 3, 2008  
Reply to Final Office Action dated: October 3, 2008

## **REMARKS**

No amendment has been made in response to the outstanding Final Office Action mailed on October 03, 2008. The Examiner's reconsideration is respectfully requested in view of the following remarks.

Claims 1-7 and 9-13 are pending in the present application. Claims 11-13 have been previously withdrawn in response to a Restriction Requirement.

### **Claim Rejections Under 35 U.S.C. § 103**

Claims 1-7, 9 and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over van der Slot, et al. (*Organometallics*, 2002, 3873-3883; hereinafter, "van der Slot") in view of Billig, et al. (*Kirk-Othmer Encyclopedia of Chemical Technology*, 1996, "Oxo Process" Pages 1-17; hereinafter, "Billig").

Claim 1 is independent and Claims 2-7, 9 and 10 are dependent directly or indirectly from Claim 1.

Claim 1 includes, *inter alia*, the following limitations:

"the concentration of the transition metal is 50 to 500 ppm based on the amount of the catalyst composition, and the concentration of the bidentate ligand is 0.5 to 20 mol and the concentration of the monodentate ligand is 0.1 to 50 mol, respectively per mol of the transition metal" (Emphasis added)

As above, Claim 1 limits the concentration of the transition metal to 50 to 500 ppm based on the amount of the catalyst composition, and the contents of the bidentate ligand and the monodentate ligand to 0.5 to 20 mol and 0.1 to 50 mol, respectively, per mol of the transition metal, thereby enabling to improve both the catalytic activity and stability, as described in lines 10-27 on page 6 of this application.

However, van der Slot and Billig, either alone or in combination, does not teach or suggest the above limitations to the contents of the transition metal, the bidentate ligand and the monodentate ligand, as recited in Claim 1.

In the outstanding Final Office Action, the Examiner has asserted that these concentration ranges and contents recited in Claim 1 are optimum or workable ranges by routine experimentation. Applicants respectfully disagree with the Examiner's assertion.

Applicants submit that such concentration ranges and contents are critical, as clearly illustrated in lines 10-27 on page 6 of this application, and produce unexpected results, which are greater than the sum of van der Slot and Billig.

Specifically, Comparative Examples 1 and 3 of this application correspond to van der Slot and Billig et al. respectively, and show N/I values in the range of 3.9~10.1. However, the low N/I value (3.9) leads to a low catalytic activity (85.4), as shown in Comparative Example 1. (See Table 2 on page 9 of this application.)

In contrast, Examples of the present invention shows N/I values in the range of less than 3.2 and greater than 15.7 with high catalytic activity. Further, as is evident from Example 1 of the present invention, even a lower value of N/I (3.2) results in a higher catalytic activity (253.6). (See Table 1 on page 8 of this application)

Therefore, Applicants respectfully submit that these results are unexpectedly synergistic and greater than the sum of the effects of van der Slot and Billig when taken separately.

It is therefore submitted that the concentration ranges and contents as recited in Claim 1 are critical and, in combination, generate unexpected results, and thus, cannot be reached by routine experimentation. Accordingly, Applicants respectfully submit that Claim 1 is allowable over van der Slot and Billig.

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Claims 2-7, 9 and 10 are also believed to be allowable, by means of their direct or indirect dependency from Claim 1.

Applicants respectfully request the Examiner to review these submissions and withdraw the rejection on the claims under 35 U.S.C. § 103(a).

### Conclusion

In view of the foregoing, it is respectfully submitted that the instant application is in condition for allowance. Reconsideration and subsequent allowance of this application are courteously requested.

If there are any charges due with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130 maintained by Applicant's attorneys.

The Examiner is invited to contact Applicant's Attorneys at the below-listed telephone number with any questions or comments regarding this Response or otherwise concerning the present application.

Respectfully submitted,

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